UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/613,418	07/10/2000	Michael G. Mayer	85773-227	9352

28291 7590 03/07/2005

FETHERSTONHAUGH - SMART & BIGGAR
1000 DE LA GAUCHETIERE WEST
SUITE 3300
MONTREAL, QC H3B 4W5
CANADA

EXAMINER	
SEFCHECK, GREGORY B	
ART UNIT	**PAPER NUMBER**
2662	

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/613,418	MAYER, MICHAEL G.	
	Examiner	Art Unit	
	Gregory B Sefcheck	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 10-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 April 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- Applicant's Request for Continued Examination filed 12/27/2004 is acknowledged
- Claims 8 and 9 have been cancelled.
- Claims 1, 7, 10, and 16 have been amended.
- Claims 1-7 and 10-16 remain pending.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show how the Frequency Control Unit 210 of Fig. 2 detects the incoming arbitrary transmission rate as described in the specification on pg. 9, lines 9-10. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-7 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US 5,563,891) in view of Bowen et al. (US 6,385,267), hereafter Bowen.

- In regards to Claim 1, 7, 10, and 16,

Wang discloses a synchronizer and method thereof comprising an input for receiving a digital signal and a data recovery unit (element 110 and input signal) that recovers a first clock signal from the received signal indicative of the signal's transmission rate (Fig. 6; Col. 8, line 33; Fig. 6, element 110; claim 1,10,16 - synchronizer and method thereof comprising input of arbitrary rate and a data/clock recovery unit):

Wang shows that the recovered first clock signal is used to generate a second clock signal indicative of an allowable transmission rate of the network (Col. 8, lines 43-

57; Col. 10, lines 15-19; Fig. 6, elements 115, 130, 135, 140, 145 and 155; claim 1,10,16 - clock generator coupled to clock recovery for generating second clock indicative of network line transmission rate).

Wang further discloses a mapping unit (elements 120 and 150) that receives the second clock signal and maps the data into a frame structure at the network transmission rate and outputs the signal to the network (Col. 1, lines 44-45; claim 1,10,16 – mapping the stream into a frame output at the rate of the second clock).

Wang does not explicitly disclose a clock generator performing frequency multiplication of the first clock on a first input and a control signal on a second input for generating a second clock.

Bowen discloses a clock generator that generates a second clock signal based on a frequency multiplication of a first clock signal and an adjustment (control) signal (Figs. 1 and 2; Col. 2, lines 45-58; Col. 6, lines 12-23; claim 1,10,16 – second clock generated by frequency multiplication of the first clock signal; claim 7 - clock generator has multiplier).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and synchronizer of Wang by generating a second clock signal based on a frequency multiplication of a first clock signal and a control signal, as shown by Bowen. This modification provides a correlation between the first and second clock signals so that the integrity of the data can be maintained at the different clock rates while the use of such a control signal enables marginal increases and/or decreases in the generated clock when necessary (Bowen; Col. 2, lines 55-57).

- In regards to Claims 2-5 and 11-14,

Wang discloses a synchronizer and method that covers all limitations of the parent claims.

Wang discloses applicability of the synchronizer and method in communications networks such as data networks, which encompasses asynchronous optical and electrical networks (Col. 1, lines 18-20; claim 2,11 – network is optical; claim 3,12 - async optical; claim 4,13 - electrical; claim 5,14 - async electrical).

- In regards to Claim 6 and 15,

Wang discloses a synchronizer and method that covers all limitations of the parent claims.

Wang shows a synchronizer and method thereof in which data within a frame are put into payload and stuffing bit positions of an appropriate time-slot assignment (Col. 10, lines 22-25; claim 6,15 - distribute data through time slots and stuff bits).

Response to Arguments

4. Applicant's arguments with respect to claims 1-7 and 10-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Sinha et al. (US20020114354A1) discloses synchronizing clocks across a communication link
- Thomas (US006832046B1) discloses a method and apparatus for multirate transmission in a passive optical network
- Murakami (US006658074B1) discloses a method and apparatus for reproducing clock signals of low order group signal
- Kawase et al. (US006628214B1) discloses a deserializer, semiconductor device, electronic device, and data transmission system
- De Langhe et al. (US005471511A) discloses a digital phase-locked loop arrangement for use in a desynchronizer
- Stern et al. (US005150386A) discloses a clock multiplier/jitter attentuator

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GBS
3-3-2005

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600